P.Z.S.1901,vol.II.Pl.XIV.


1b.

$1 a$.

1.

2.


26 .


1e.


22

2 e.
Mintern Bros imp


ICUS.
5. A List of the Reptiles and Batrachians obtained by Mr. A. Blayney Percival in Southern Arabia. By the late Dr. J. Anderson, LL.D., F.R.S. With Notes by the Collector. ${ }^{1}$
[Received May 14, 1901.]
(Plates XIV. \& XV. ${ }^{2}$ )

## REPTILIA.

## LACERTILIA.

Geckonide.

## 1. Stenodactylus dorile Blanf.

Three specimens from the Abian country. One, an adult female, the largest of the species I have seen, measures 60 mm . from the snout to the vent, and the tail 46 mm . The second female is about half-grown; the third is a male, also young. It has two well-developed preanal pores. All three were collected by Mr. Percival in the Abian country.

The adult female has well-defined large brown spots on the back and much smaller whitish ocelli, margined with brown, intermixed among the brown speckling. The other two individuals have no large brown dorsal spots, but the pale brownish of the back is marked by numerous round white spots, with a dark ring encircling each, intermixed among the dark rings and dark brown speckling. The coloration is much the same as that of the Egyptian S. elegans, from which this form differs chiefly by the divided character of the scales or plates on the under surface of the toes.

## 2. Bunopus spatalurus, sp. n. (Plate XIV. fig. 1.)

Head oval, flattened from between the eyes and backwards to the occiput. Snout short and somewhat broad, its length equalling once and a half the longitudinal diameter of the eye and one-third the total length of the head on the upper surface. Forehead convex ; a short depression behind each nostril. Eye rather large, its longitudinal diameter equal to the distance between the hinder border of the ear and external canthus. Ear a narrow oval slit placed obliquely, from above downwards and forwards, about half the long diameter of the eye. Body not depressed but rather compressed, covered with somewhat imbricate or juxtaposed scales of irregular size, the larger more numerous than the

[^0]smaller scales, some of them on the middle of the back showing a tendency to carination. . Scales of the upper surface of the head juxtaposed, flat, rounded, hexagonal. A few rounded tubercles on the temporal and occipital regions. Rostral once and nearly one half as broad as high, apper external angles rounded off, mesial line cleft in its upper half. Nostril defined by the rostral, first labial, and three nasals. Ten upper and lower labials. Mental nearly as broad as long, outer margin opposed to first labial, concave, with another shorter concave margin behind it, against which lies a small shield, the most anterior of the line of enlarged granules which lies below the lower labials. Gular scales granular. Ventral scales more or less pointed and feebly carinated. Tail verticillate throughout, cylindrical in its anterior half, and flattened from above downwards in its posterior moiety, with the tip slightly laterally expanded; no enlarged scales inferiorly. Limbs moderate; digits slender, with two or three of the distal phalanges forming an angle with the base as in Gymnodactylus, covered with transverse lamellæ more or less spiny or tuhercular. Four preanal pores. General colour greyish, the head finely and obscurely speckled irregularly with black. A broad black band passing from side to side across the nape of the neck from behind the temporal region, succeeded by five similar broad bands on the trank and eight on the tail, the intervening greyish areas being not quite so broad as the black bands. The dark bands are continued down on both sides of the trunk, but on the tail they form rings. Underparts whitish.

From snout to vent 35 millimetres; tail 23.
This species is of considerable interest, as it seems somewhat to connect the two genera Bunopus and Gymnodactylus together. Its flattened tail somewhat expanded at the tip and the character of the body-scales are its most striking features.

Only one specimen was collected by Mr. Percival, in the Wadi Jimil.
3. Pristurus flavipunctatus Rüpp.

Numerous examples from the hills north of Lahej, towards Jimil, and from the Jimil Valley.

## 4. Pristurds crucifer Val.

Numerous examples from the same localities as the preceding, and also from the hill-country east of Aden, from Wadis between Lahej and the mountains and belor Mount Manif.

## 5. Pristurus collaris Steindachner.

Two specimens from the hills north of Lahej towards Jimil, and one from the Wadis between Lahej and the mountains. These specimens are exactly like those described from the Hadramut ${ }^{1}$. This is the first time it has been recorded from Aden.

[^1]These specimens do not throw any additional light on the relation between this species and $P$. carteri (Gray) ${ }^{1}$.
[We found these strange little beasts on the very bottest stony deserts near Manif, and again amongst the black volcanic rocks in the Abian country: they are extremely quick and are also very fragile, tails breaking off without any provocation. I obtained several with a pistol by shooting at the stone where they sat, the splashes of lead from bullet killing them. When sitting on a stone the tail is usually curled round, something like a chameleon's. They look almost white when alive. As I passed the stone on which they were, they would move round it so that their head was to be seen over the top. $-A . B . P$.]
6. Hemidactylús yerburyi Anderson.

2 . From the Bungalow at Lahej.
1 ó, 1 오. North of Lahej.
These specimens agree in all their details of structure and in their coloration with the types.
[Very common on walls and roof of the Bah Bungalow at Lahej; also about the Sultan's palace.-A. B. P.]

## Agamide.

## 7. Agama sinatita Heyden.

1 ot \& 1 ㅇ. Wadis between Lahej and the mountains.
1 of \& 1 오. Wadis below Mt. Manif, north of Lahej.
1 of \& 1 q. Lahej.
These specimens resemble the examples of this species from the Hadramut in their large dorsal scales. They consequently differ from the Sinaitic and Egyptian lizards; but as this is the only feature by which they can be distinguished, and as they have the third digit the longest, possess au enlarged plate under each claw, and have brown spines on the transverse plates of the digits, all of which are characteristic of this species, the enlargement of the dorsal scales is only a local variation which begins to show itself to the north at Medina, where the species is traced to the south from the Sinaitic Peninsula.

## 8. Uromastix (Aporoscelis) benti Anderson. (Plate XV.)

## $2 \delta^{\circ}$ adnlt and 1 ㅇ. Between Mt. Manif and Jimil.

 1 ơ. Abian Mountain.This species, originally described from the Hadramut, was obtained by Captain Nurse about four years ago from the hills 50 miles to the north of Aden ${ }^{2}$. The present specimens differ in no

[^2]respect from those obtained by Captain Nurse, nor from the Hadramut type.

Mr. Percival has added the accompanying note regarding this Lizard, which, as is well known, is a vegetable-feeder. He says it is much hunted by the Beduins, who eat it.
[This fine lizard is fairly numerons in the hills of Southern Arabia. It is a vegetable-feeder, and is much hunted by the Beduins, who eat it. The specimens now in spirit in my collections all contained small twigs and grass in stomach. The first specimen was brought me at J. Manif cut to pieces by a spear. I impressed upon the bringer that I did not want them in that state, and he promised to get some more alive : next day he brought one alive and in nice condition. Two days later at Jimil I got two more specimens; and on the last trip into the Abian country, to the east of Aden, I got two more specimens, the live one I brought home being one of them. It is a slow beast, and when seen is very easily captured, unless, as happened to me, they get into a crack in the rocks and so escape. There are, I think, one or two more species, as the Beduins say that in Dethina there is a larger species that is particularly good-eating. I did not try the lizard as an article of food, much as some of the men wished me to. I was told that they were particularly numerous along the sides of W. Yeramis, but I saw only one and that one escaped me into a crack in rocks; it was on the northern side.-A. B. P.]

The larger species referred to by the natives as occurring at Dethina may probably prove to be $U$. ornatus.

The figure here given of this beautiful lizard is taken from the living specimen brought home by Mr. Percival.

## Varanide.

## 9. Varanus griseus Daud.

[Native name "Waral." I saw only one specimen of this fine Lizard. They are not uncommon, as we often saw their spoor. Seem to live in same holes as the large Jerboa Rats (Tuft-tail Rats).-A. B. P.]

## Amphisbennide.

## 10. Agamodon arabicus, sp. n. (Plate XIV. fig. 2.)

Body much compressed, its transverse breadth at the middle being little more than one-half of its depth, whilst before the vent it is less than half of the depth. Head very short, higher than broad. Rostral considerably broader than long, triangular ; the apex or labial border curved downwards and slightly backwards and nearly half the breadth of the base of the shield. Frontal more or less concave from side to side, the lateral margins of this shield, as well as of the rostral, projecting and raised above the shields on the sides of the head. Nostril elongated, parallel to the
outer border of the rostral, in a single shield resting on the 1st, 2 nd , and 3rd upper labials. Five upper labials, the fourth and fifth the largest, the first lying below and close to the nostril. A large quadrangular postnasal lying above the 3rd, 4th, and 5th labials and below the anterior half of the ocular shield. Ocular plate considerably longer than deep, partially divided about the middle of the eye; a large postocular with three shields between it and the hinder margin of the gape. A subocular, higher than broad, lying between the postnasal and the shield below the postocular. Three lower labials, the first only in contact with the mental ; the last very large and elongated from above downwards, separated from its fellow of the opposite side by seven scales which are shut off from the posterior end of the chin-shield and from the first and second labials by seven other shields and scales, one or two of the shields being in contact with all the lower labials. Mental very elongate and ribbon-shaped, reaching as far back as the posterior border of the second labial. 161 annuli on the body, 18 on the tail. About 55 scales round the body, including the irregular scales of the vertebral and ventral lines, in the former of which there are about 7 and in the latter 3; each annulus containing about 45 quadrangular segments.

Salmon-coloured in life, the majority of the segments of the annuli being generally partially or wholly marked by a dark brown spot, absent, however, from the lower half of the sides and ventral aspect ; head-plates yellowish.

A single specimen, from the Abian country, measuring 144 millimetres.

This species is the first of the Emphyodont group of Amphisbænidæ which has been recorded from the Asiatic Continent, but Pachyealamus is found in Socotra.

Three species of Agamodon are known, viz., A. anguliceps Peters ${ }^{1}$, the type of the genus, A. compressus Mocquard ${ }^{2}$, and $A$. arabicus Anders. The first was described from a specimen obtained at Barava, and the second also from Somaliland. They constitute three well-defined species distinguished from one another by the number of annuli round the body. In the first they do not exceed 133. In A. compressus there are as many as 147 , and in $A$. arabicus there are over 160. A. arabicus has a greater number of upper labials than in the African forms, but it is quite possible that with further materials the supposed distinction will vanish. It also differs from the other species in the way in which the second lower labial is broadly excluded from the mental.
A. arabicus has the compressed form of $A$. compressus, from which it is at once distinguished by the shape of its fronto-parietal in addition to the other characters here enumerated.

[^3]|  | A. anguliceps. Barava, Somaliland. <br> B. М. 96.9.24.16. | A. anguliceps. Somaliland. <br> B. M. 89.12.16.32. | A. anguliceps. Somaliland. <br> B. M. 88.1.12.1. | A. arabicus. Abian country, Arabia. <br> B. M. 99.12.13.52. | A. anguliceps. Peters. Barava. Berlin Mus. | A. compressus Mocq. <br> - Somaliland. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Upper labials Lower labials .................. | $\stackrel{4}{3}$ | L. 3. ${ }_{3} 4$. | $\begin{aligned} & 4 \\ & 3 \end{aligned}$ | 5 3 | 3 | 3 3 |
| Scales between last lower labials $\qquad$ | 9 | 14 | 11 | 14 | 12 | 6 |
| Annuli round body ......... | 133 | 132 | 132 | 161 | 132 | 147 |
| Annuli round tail.. | 16 | 16 | 15 | 18 | 17 | 23 |
| Segments and scales round body | 50 | 50 | 50 | 55 |  |  |
| Preanal pores ............. | 110 | $\stackrel{4}{4}$ | 129 | 0 130 | 153 | 103 |
| Snout to vent | 110 | 105 | 122 | 130 | 19 | ${ }_{12} 12$ |
| Tail............... | 12 9 | 19 | 11 | $\begin{array}{r}14 \\ 8 \\ \hline\end{array}$ | 11 |  |
| Head-shields, length of, | 6 | 6 | 7 | 6 |  |  |
| Nasal in contact with upper labials | L. 1\&2. R. 1,2,3 | J. 1, 2, 3 . <br> R. $1,2,3,4$. | L. 1, 2, 3. R. 1, 2, 3 . | 1, 2, 3. | 1, 2, 3. | 1 \& 2. |
| Præocular in contact with. | fronto - parietal, rostral, nasal, 3 \& 4 labials and subocularand ocular 2 labials on left side. | rostral, nasal, R. 4 labial, L. 3 \& 4, subocular and ocular. | rostral, nasal, 3 \& 4 labials, subocular and ocular. | fronto - parietal, rostral, nasal, 3, $4 \& 5$ labials, subocular and ocular. | fronto - parietal, rostral, nasal, 2 \& 3 labials, subocular, ocular. | fronto - parietal, 2 \& 3 labials, nasal, subocular, and ocular. |
| First upper labial and mental | broadly in contact. | broadly in contact. | broadly in contact. | broadly in contact. | broadly in c ontact. | broadly in contact. |
| Second upper labial and mental | broadly iu contact. | R. contact, <br> L. excluded. | broadly in contact. | broadly excluded. |  | broadly in contact. |

Peters's definition of the genus is as follows :-" Dentes maxillarum tomiis innati. Caput superne scutis duobus, rostrali frontoparietalique, obtectum. Oculi distincti, superolaterales. Corpus subbreve; segmenta lateralia quadrangularia, dorsalia ventraliaque media minora, squamiformia; sulcus lateralis nullus, spinalis obsoletus, abdominalis medianus distinctus; pori præanales distincti. Cauda compressa, apice acuminato." In his further explanation of the generic characters he states that the nasal was sickle-formed, and in his account of the specific characters he states that there were three upper labials, but that in the type the first upper labial had united with the nasal, separating only two labials, the nasal entering the labial border, there, however, being in reality 3 upper labials.

Mocquard, who had 9 examples of $A$. anguliceps Peters under observation, viz., 7 males and 2 females, states that they all had 4 upper labials instead of 3 as described by Peters, so that in A. anguliceps these shields may vary from 2 to 4 , the smaller of these numbers being due to the first labial amalgamating with the nasal. Four, however, would appear to be the prevalent number in this species.

In the specimen 88.1.12.1 there are two well-developed and prominent preanal pores, whereas in the individual 89.12.16.32 there are four small blackish orifices in the position of pores exactly as figured by Peters. If these pores are confined to the males, then the specimen 96.9 .24 .16 and the type of $A$. arabicus are females.
[This burrowing reptile I obtained at Al Khaur from a ploughed field, it being thrown out by the plough just as I passed. It was salmon-pink in colour when alive.-A.B.P.]

## Lacertide.

11. Acantiodactylus cantoris Günther.


No. of specimens.
$1 \& 2.2$ or. Wadis between Lahej and the monntains.
3. 1 juv. Wadi below Mount Manif north of Lahej.
4. 아. Hills north of Lahej towards Jimil.
5. Juv. Jimil Valley.
6. Abian hill-country east of Aden.

None of the examples of this species hitherto recorded from Aden and its neighbourhood bave had fewer than 38 scales transversely and dorsally between the ventrals at the middle of the body, but in some of the foregoing examples there are as few as 32 , so that now the range of variation in the number of dorsal scales in the region indicated is as much as 25 , the highest number occurring in Baluchistan, and the lowest in the Aden district, where the variation may be as much as 13 .
12. Acanthodactylus boskianus Daud.

|  | ¢ |  | E゙ ت゙ |  | - |  |  | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1........... | ㅇ | 72 | ? | 34 | 10 | 16 | 11.7 | $\begin{array}{cc}\mathrm{L} & \mathrm{R} \\ 20 & 12\end{array}$ |
| 2........... | 아 | 60 | 128 | 36 | 10 | 17 | $11 \cdot 4$ | $21 \quad 21$ |
| 3....... | $\sigma^{\circ}$ | 72 | 163 | 37 | 10 | 17 | 12 | $23 \quad 23$ |

1. 1 ㅇ. Wadi between Lahej and the mountains.
2. 1 ㅇ. Wadis below Mt. Manif.
3. 1 ot. Abian country.

These specimens belong to the variety aspera, as is shown by the small number of scales between the ventrals across the back. Thirty-four is a lower number than has hitherto been recorded.
13. Latastia longicaudata Reuss.

1 of. Shaikh Othman.
Snout to vent 98 mm ., tail 320 mm .
The only distinction in which this male differs from African specimens is in the greater number of its femoral pores. The highest number yet recorded in Africa is 14, whereas in this South Arabian specimen there are as many as 16. The following are the numbers of plates and scales present in this individual :-

Ventrals from side to side 6. Ventrals between collar and preanal region 31. Collar-plates 9. Upper labials 9 (6th below eye). Scales round middle of body 58.

This is the second occasion on which this species has been recorded from Asia. In the first instance it was found at Tor on the Sinaitic Peninsula, and these specimens constituted the types of the species.

## 14. Latastia hardeggeri Steind.

Latastia hardeggeri, Steind. Ann. Hotmus. Wien, vi. 1891, p. 371, pl. xi.; Blgr. Zool. Rec. 1893, Rept. p. 23 ; id. Ann. \& Mag. N. H. (7) v. 1898, p. 130.

Eremias heterolepis, Boettg. Zool. Anz. 1893, pp. 115 \& 193.
Philochortus neumanni, Matschie, SB. Ges. naturf. Fr. Berl. 1893, p. 30.

Latastia neumanni, Anders. P. Z. S. 1895, p. 643, pl. xxxvii. fig. 1 ; id. Herpet. of Arabia, 1896, pp. 73, 80, 85, \& 88.

1 ơ, 1 ㅇ, and 1 juv.

|  | $\delta$ \% | ㅇ. | Juv. | Berbera. Juv. $0^{\circ}$. |
| :---: | :---: | :---: | :---: | :---: |
| Snout to vent | 74 | 82 | 51 | 43 |
| Vent to tip of tail............. | 205 | 190 | ? | 12. |
| Ventrals across body ......... | 6 | 6 | 6 | 6 |
| Ventrals, collar to preanal region | 32 | 31 | 31 | 30 |
| Plates of collar ................. | 8 | 8 | 9 | 8 |
| Upper labials................... | 9-9 | $8-8$ | 9-9 | 9-9 |
| Upper labials under eye ...... | 6-7 | $5-5$ | 6-6 | 6-6 |
| Scales round middle of body... |  | ${ }^{39}$ | 39 | 34 |
| Femoral pores ................. | 16-15 | 15-14 | 16-15 | 12 |

The first specimen of this species from Aden which came under my observation had 42 and 47 rows of scales across the middle of the body between the ventrals. These recent specimens from practically the same locality have only 38 and 39 rows of scales. In an example in the British Museum from Berbera there are only 34 rows of scales. Mr. Boulenger, in identifying this example of L. hardeggeri in $1898^{1}$, remarked that in fact "nothing but a smaller number of scales across the body (about 30 exclusive of the ventrals) distinguishes it" from $L$. neumanni. The specimen, however, with which he dealt, he states had 34 rows. The circumstance that there is only a difference of 4 rows of scales between the recent acquisition from Aden and the Berbera lizard referable to L. hardeggeri, canses the supposed distinction to break down, and $L$. neumanni must be relegated as a synonym to L. havideggeri. The range of scales exclusive of the ventrals has now been ascertained to be from 30 to 47 .
15. Eremias guttulata Licht.
19. Jimil valley.

1ㅇ. Abian country east of Aden.
The palpebral disk of these specimens consists of two semitrans-

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{ }^{1} \text { Ann. \& Mag. N. H. (7) ii. 1898, p. } 130 .
$$

Proc. Zool. Soc.-1901, Yol. II. No. X.
parent plates, of about equal dimensions, as in Egyptian examples of this species. In both the interparietal is directly in contact with the occipital.

| Snout to vent. | Tail. | Scales round body including ventrals. | Mesial longitudinal line of ventrals. | Position of subocular between labials. | Femoral pores. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 | 73 | 49 | 30 | $\begin{array}{cc} \mathrm{L} . & \mathrm{R} . \\ 4 & 5 \end{array}$ | 13-13 |
| 38 | ? | 56 | 30 | L. $4 \& 5$ <br> R. 5 \& 6 | $12-13$ |

Recently figured, see 'Symbolæ Physicæ, seu Icones adhuc ineditæ,' of Hemprich \& Ehrenberg, Zool. i. Amph. pl. ii. fig. 1.

## Scincide.

16. Mabuia brevicollis Wiegm.
17. Wadis between Lahej and the mountains.
18. " ", " "
19. ㅇ. Abian hill-country E. of Aden.
20. Juv. of foregoing specimen.
21. 
22. In membranes of foregoing specimen.
23. Abian country.
24. Jimil Valley.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 아. | 121 | 187 | 27 | 16 | 35 | 49 | 32 | 3 | $\underset{1, ~ L . ~}{\text { L. }} \underset{2,3 .}{2} .$ | 1 | 1 | 58 | 87 |
| ㅇ. | 95 | 150 | 20 | 12 | 30 | 41. | 30 | 2 | - \& 3 2 \& 3 | $1 \& 21$ | 1 | 50 | 31 |
| 오. | 122 | ? | 25 | 16 | 34 | 49 | 32 | $\begin{array}{cc}\text { L. } & \mathrm{R} \\ 3 & 2\end{array}$ | \& 3 | 182182 |  | 59 | 35 |
| $\delta$ \% | 38 | 50 | 11 | 7 | 13 | 16 | 32 | ? | 2 \& 3 | 1 \& 2 | 1 | 16 | 13 |
| O. | 38 | 50 | 11 | 7 | 13 | 16 | 32 | 2 | 283 | $1 \& 2$ | 1 | 16 | 13 |
| 0 \% | 125 | 170 | 28 | 21 | 36 | 49 | 33 | 3 | 2 \& 3 | $1 \& 口$ | 1 | 61 | 37 |
|  | 48 | ? | 13 | $\delta$ | 15 | 21 | 32 | . 23 | 2 \& 3 | $1 \& 2$ | 1 | 24 | 15 |

This lizard and the specifically identical Euprepes pyrrhocephalus Wiegm. have been figured in the recently published work entitled 'Symbolæ Physicæ, seu Icones adhuc ineditæ \&c.,' of Hemprich \& Ehrenberg, Zool. i. Amph. pl. v. figs. 1 \& 2.

The large female, the mother of the young ones, is completely devoid of white spots. The dark longitudinal lines are only feebly indicated, but the small dark brown spots by which they are marked are very distinct. The white lateral band is more or less distinct. The specimen No. 2 has much the same characters, but there are here and there faint traces of white spots. In the large female No. 1 the dark lines and dark brown spots are present, and white spots on the anterior part of the body. In the adult male the general colour is pale brown, each scale having a dark brown margin. A few white spots occur on the sides of the body. The pale lateral band is present, and below it is a broadish dark band extending back from the eye to the hind limb, blackish on the sides of the head and neck, but becoming pale brown behind the axilla. The sides of the body below the band are of a pale livid tint extending on to the throat, which is dark-spotted; white spots on the upper and lower labials.

The young is marked dorsally by two broad, very pale brown bands defined by a mesial and by a very narrow pale whitish band externally. These three lines converge on the base of the tail. There are six longitudinal lines, each consisting of 18 well-defined black spots from the head to the interfemoral region, but beyond that they are prolonged on to the tail. There are two transverse sets of spots to each of the broad brownish areas, and another somewhat more transversely elongated set of black spots along the side on a somewhat pale brownish lateral band from the eye to the hind limb, the sides of the body below it being also blackspotted. The upper surface of the fore limbs is pale brownish with obscure whitish spots, whereas the corresponding aspect of the hind limb is markedly black-and-white spotted. Underparts pure white. The mesial white longitudinal dorsal line disappears in the adult, but the white lateral line of each side is more or less persistent throughout life. In none of the very young which I have examined are white spots associated with the dark spots as occur in some adults. Young lizards with the foregoing coloration correspond to M. pulchra Matschie.

In two of the foetuses the male generative organs are extruded.

## 17. Scincus hempricini Wiegin.

## 1 of. Sbaikh Othman.

$1{ }^{\circ}$. Lahej and south to Shaikh Othman.
This lizard has been recently figured in the part of the "Symbolæ Physicæ' entitled "Icones adhuc ineditæ \&c.," 1899, Zool. i. Amph. pl. iv. figs. $1 \& 1 a$.

The Aden specimen described by me in 1895 differed from the type preserved in the Berlin Museum and from Professor

Bœttger＇s Aden example of the species in laving 24 instead of 22 rows of scales round the body，whereas out of the three specimens now recorded 22 is the prevailing number．

In all of these specimens the frontoparietals and frontal are normal，also the supraorbitals．

| 官 |  | ت゙ |  |  |  |  |  | Locality． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 ． | 101 | 48 | 27 | 18 | 29 | 33 | 22 | Shaikh Othman． |
| $\delta$ \％． | 140 | 82 | 42 | 29 | 41 | 44 | 22 | Lahej to south of Shaikh Othmen． |
| ¢ | 90 | 58 | 25 | 17 | 26 | 31 | 24 | Otsar． |

18．Chalcides ocellatus Forskål．
1．Wadis between Lahej and the mountains．
1．Wadis below Mount Manif north of Lahej．
1 juv．Abian country．

|  | : |  |  |  |  |  |  |  |  | $\left\lvert\, \begin{gathered} \text { so } \\ 0.0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{gathered}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 102 | 107 | 7 | 19 | 21.5 | 27 | over suture of | $1 \& 2$ labials． | 2 | R．8－6 | 5 | 30 |
| 124 | 90 | 8 | 20 | 23 | 29 | costral $\begin{gathered}\text { rond } 1 \text { st } \\ \text { and } \\ \text { labial．}\end{gathered}$ | $1 \& 2$ | 2 | R． 8 L． $8-7$ | 5 | 30 |
| 46 | 43 | 4 | 95 | 11 | $14 \cdot 5$ |  | $1 \& 2$ | 2 | R． R L． $8-6$ | 5 | 30 |

In both the adults，the broken，more or less oblique or transverse black dorsal bands，the breadth of a scale，are well－defined， each dorsal and lateral scale included in the black band being provided with the nsual pure white narrow spot．In the smaller of the two，the black bands with the white spots constitute about 26 transverse dorsal bands，whereas in the larger specimen they are nearly obliterated．In the young there are no black bands，but many of the scales have a white spot margined with blackish，but on the tail there are feebly indicated pale brown dorsal bands with white spots，as in the last mentioned adult． The coloration of these lizards thus conforms to that distinctive of the typical form of this species．

The largest of the two adults is four millimetres longer than the largest male yet recorded by me ${ }^{2}$.
[Not uncommon in desert between Lahej and Shaikh Othman : only obtained at night by going out with a lantern and looking for tracks in sand and by throwing the sand aside which indicated where the animals had gone down, until they were thrown or had come out again. Chalcides ocellatus was very common in and around Lahej, and in fact everywhere we went.-A. B. P.]

## RHIPTOGLOSSA.

## Chameleontide.

19. Chameleon calcariffr Peters.
20. Lahej.

20 . Shaikh Othman.
1 juv. ㅇ. Abian country.

| Sex, | Snout to end of casque. | Augle of mouth to summit of casque. | Snout to vent. | Vent to tip of tail. |
| :---: | :---: | :---: | :---: | :---: |
| \% ..... | 74 | 54 | 230 | 265 |
| 0 \% | 71 | 50 | 195 | 220 |
| $\sigma$ | 39 | 26 | 108 | 122 |
| 우 ...... | 25 | 17 | 74 | 80 |

In the adult and semiadult the anterior border of the casque is nearly straight, whereas in the other two much younger specimens it is decidedly concave in its curvature. The occipital lobes of the second specimen are somewhat more developed relatively than in the adult.

## OPHIDIA.

## Colubride.

## 20. Zamenis rhodorhachis Jan.

1. Abian country.

| Snout <br> to vent. | Tail. | V. | A. | C. | Scales. | Upper <br> labials. | Labials <br> entering eye. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q $\ldots 655$ | 245 | 221 | $1 / 1$ | 131 | 19 | $9+9$ | $5 \& 6$. |

This snake is of a uniform greyish-blue or slate-colour along two-thirds of the length of the trunk, whereas in the latter third and on the upper surface of the tail it passes into purplish brown.

[^4]On the neck there is a narrow interrupted blackish mesial line, becoming more marked as it is traced backwards, and so broad at the anterior fourth as to cover the greater part of the back, ultimately extending over the whole of the dorsal surface and producing the purplish-brown colour already referred to. Exiernally to the dark area, about the middle of the body, there are a few black scales on the sides and on the angles of the ventrals. The upper surface of the head olive-greyish. Upper lips pale greyish-yellow. Under surface of neck anteriorly yellowish, passing into dusky, which is the general colour of the ventrals, which have darker borders, whereas the under surface of the terminal fourth of the body is dark purplish-brown.

It recalls in its coloration the snake from Ogaden in Somaliland described by Boettger ${ }^{1}$ under the name of Z. ladacensis var. subnigra, but differs from it in some details, but of such little importance that the type of coloration first indicated by Boettger may be said to be common to individuals of Z. rhodorhachis from both sides of the Red Sea in the latitude of Aden.
The type of Boettger's var. subnigra had ventrals 213, anals 1/1, caudals 118 , and scales 19.
21. Tarbophis guentheri Anderson.

1 우. Abian country.

| $\begin{array}{cc} \begin{array}{c} \text { Snout } \\ \text { to vent. } \end{array} & \text { Tail. } \\ 650 & 125 \end{array}$ | $\begin{array}{cc} \text { V. } & \text { A. } \\ 229 & 1 \end{array}$ | $\begin{array}{cc} \text { C. } & \text { Scales. } \\ 65 & 21 \end{array}$ | Upper labials. $9+9$ | Labials entering eye. $3,4, \& 5$ |
| :---: | :---: | :---: | :---: | :---: |
| Number of dark dorsal spots. | Preocular. | Relation of preocular to frontal. | Postoculars. | Temporals. |
| Ill-defined, not sufficiently distinct | 1 | In contact. | 2 | R. $2+3$. <br> L. $2+4$. | to be counted.

The coloration of this specimen resembles that of the specimen already recorded from Lahej. The undivided anal, the number of the scales round the body being less than 23 , and the arrangement of the labials entering the orbit, are all characters distinctive of this form, which, however, is very closely allied to T. obtusus Reuss.

## 22. Celopeltis moilensis Reuss.

1 우. Abian country.


[^5]This species was first recorded from Arabia by Rüppell. In 1895 it was met with for the first time at Aden by Col. Yerbury ${ }^{1}$, and in 1896 Bent brought it back with him from the Hadramut. In the smallness of the dark spots the present example corresponds to the Egyptian snakes. Those from Suakin are distnguished by large black spots and more vivid colouring.

## 23. Psammophis schokart Forskål.

1. Abian country.

| Snout to vent 228 | t. Tail. 155 | Ventrals. 181 | Anals. 1/1 | Caudals. 154 | Scales. 17 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Upper <br> labials. | Labials entering eye. | Relation of præocular to frontal. | Temporals in contact with postoculars. 2 |  | Number of nasals. 2 |
| 9 | $5 \& 6$ | Broadly in contact. |  |  |  |

A dusky band from the nostril through the eye to the temporal region. Upper parts pale greyish, under surface white, but with a minute black spot generally present in the angle of each ventral. The lineated form of this snake also occurs in the Aden district. 154 caudals is the highest number yet recorded in Arabia, in which the individuals of this species are distinguished from those found in Africa by the more numerous caudals.

## Viperides.

24. Cerastes cornuyus Hasselq.

1 오. Abian country.

| Snout |  |  |  |  | Upper | Scales between |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| to vent. | Tail. | V. | A. | C. | Sc. | labials. | labials and eye. | Horns. |
| 335 | 42 | 139 | 1 | 37 | 28 | L. 13, R. 12 | 5 | None. |

The two extremes, or nearly so, of the range of variation in the ventrals are met with in South-east Arabia, as this individual possesses 139 ventrals, whereas in the Hadramut the highest number of ventrals (164) hitherto recorded of the species is met with. An Aden specimen obtained by Colonel Yerbury in 1895 had as many as 159 ventrals.
25. Echis carinatus Schneider.

1 ㅇ. Lahej.

| Snout to vent. | Tail. | Ventrals. | Anal. | Caudals. | Scales. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 610 | 52 | 167 | 1 | 27 | 29 |
| Nasals. | Nasals and <br> supranasals. | Scales round eye. | Upper labials. |  |  |
| 2 | In contact with <br> rostral. Left supra- <br> nasal excluded. | L. 19. | R. 21. | L. l2. | R. 11. |

[^6]Hitherto the specimens from South-east Arabia have had never less than 30 subcaudals.

## BATRACHIA.

1. Rava cyanophlyctis Schneider.

1 ठ. Abian country.
2. Bufo andersoni Blgr.

1. Shaikh Othman.
2. Bufo pentoni Andersoin.
3. Wadis below Mount Manif north of Lahej.
4. Abian country.
explanation of the plates.
Plate XIV.
Fig. 1. Lunopus spatalurus, p. 137.
1a. Upper view of head. $\times 2$.
1b. Side
1c. Lower " ",
5. Agamodon" arabicus, p. 140 .
$2 a$. Upper view of head. $\times 3$.
26 . Side
2c. Lower ", ", "
Plate XV.
Uromastix (Aporoscelis) benti, p. 139. $\frac{2}{3}$.
6. Description of a new Fish of the Genus Gobius obtained by Mr. A. Blayney Percival in South Arabia. By G. A. Boulenger, F.R.S.
[Received May 14, 1901.]
(Text-figure 9.)
The collection made by Mr. Percival, the Mammals, Birds, and Reptiles of which have been reported upon by Mr. O. Thomas, Mr. W. R. O. Grant, and the late Dr. Anderson, contained examples of only two species of Fishes, viz., the widely distributed Cyprinid Discognathus lamta, and a fine Goby which I propose to name

Gobius percivali, sp. n. (Text-fig. 9, p. 153.)
No canine teeth. Depth of body 4 times in total length, length of head $3 \frac{1}{2}$ times. Head slightly longer than broad; diameter of


[^0]:    ${ }^{1}$ This paper had heen prepared shortly before his death by the author, whose MS., however, comprised no introduction. For an account of Mr. Percival's Expedition, see P. Z. S. 1900, p. ${ }^{\text {ƏJ. }}$
    ${ }_{2}^{2}$ For an explanation of the Plates, see p. 152.

[^1]:    ${ }^{1}$ Herpetology of Arabia (Anderson), 1896, p. 34.

[^2]:    ${ }^{1}$ Conf. Boulenger, Ann. Mus. Genov. (2) xvi. 1896, p. 549.
    ${ }^{2}$ Herpetology oî Ara'jia (Anderson), 1896, p. 63.

[^3]:    ${ }^{1}$ Peters, Sitz. Ak. Wiss. Berl. 1882, p. 579, pl. x.
    ${ }^{2}$ Mocquard, Mém. Cent. Soc. Philom. 1888, p. 121*, pl. xi. figs. 2, 2 a to $2 c$.

[^4]:    ${ }^{1}$ Herpet. Arabia, 1896, p. 50 ; Zool. of Egypt, Rept. \& Batr. 1898 p. 219.

[^5]:    ${ }^{1}$ Zool. Anz. 1893, p. 118.

[^6]:    ${ }^{1}$ Proc. Zool. Soc. 1895, p. 656 ; Herpet. of Arabia, p. 52.

